REMARKS

Reconsideration and allowance for the above-identified application are respectfully requested. Claims 1, 2, 4, 6-13, 15-20, 22, and 23 remain pending, wherein claims 1, 2, 4, 6, 7, 15, and 20 have been currently amended, and wherein 3, 5, 14, and 21 have been canceled.

The Office Action rejects claims 1-12, and 20-23 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,725,272[1] to Susai et al. ("*Susai*") in view of U.S. Patent No. 6,789,119 to Zhu et al. ("*Zhu*"). In addition, the Office Action rejects claims 13-19 as allegedly being unpatentable over U.S. Patent No. 6,584,321 to Coan et al. ("*Coan*") in view of *Zhu*. Applicant respectfully traverses these grounds of rejection.[2]

The present invention provides for an HTTP-based, reliable messaging protocol that enables bi-directional reliable massaging through a web proxy. The proxy facilitates communication between a client and server using HTTP protocol, which a request-reply protocol, thereby not allowing unsolicited messages to pass from the server to the client. As a result, current messaging protocols require that the client periodically, and with great frequency, transmit requests for messages through the web proxy to the web server.

The present invention solves this problem and enables the sending of bi-directional unsolicited messages through a web proxy server. The present invention uses two client-initiated virtual channels to enable this bi-directional messaging. One channel is for client-to-server communication and server message delivery acknowledgments. The other virtual channel is for server-to-client communication and client message delivery acknowledgements.

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[1] Applicant notes that the Office Action referenced *Susai* as U.S Patent No. 6,752,272, which is the citation to a patent without Susai as a named inventor. Nevertheless, the Notice of References Cited includes a *Susai* citation with a U.S. Patent No. of 6,725,272. Accordingly, Applicant assumes that the U.S. Patent No. cited for *Susai* within the Office Action is a typographical error and will respond to the Office Action as if *Susai* were cited as in the Notice of References Cited.

For the server-to-client communication, requests are made and parked at the server. The parked request enables the server to reply to the client whenever the server has a message that needs to be sent. During this communication phase, the server sends an HTTP reply with the message content to the web proxy, which will forward the reply with the message content to the client. This reply is in response to the parked request previously delivered, and embodies the message that needs to be sent form the server to the client. In response to the receipt of this reply, the client will send a delivery acknowledgement as an HTTP request to the web proxy, which will then forward the HTTP request with the message acknowledgement to the server. This acknowledgement will act as the parked request to which the server may then respond with the next message whenever the server generates such message.

In another embodiment of the present invention, client generated requests parked at a server may include a request that the server send a reply after a period of time. This will ensure that the client's proxy server will not timeout and close the connection due to inactivity on the channel. When the client receives the timed reply, the client may again send a request that may remain parked at the server until the server has a message to send, or until the suggested time for transmission of a reply to avoid proxy connection closure. Other embodiments allow for the time period that the client specifies for this connection maintaining reply may be dynamically adjusted based on the particular proxy employed by the client's system, or may be set too a discrete value.

Independent claims 1 and 20 describe various methods that are directed toward some of the above embodiments. Claim 1 is described from the client's perspective, whereas claim 20 is from the server's perspective. Claim 1 recites, *inter alia*, a method of bi-directionally

[2] Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to do so in the future. Accordingly, any amendment or arguments made herein should not be construed as acquiescing to

communicating between a first processor on a private computer network and a second processor not on the private computer network, the communication path including a public computer network and a proxy server coupled to the private computer network and separating the private compute network from the public computer network. The method comprises: transmitting a first HTTP-based "request" from the first processor to the second processor; transmitting a second HTTP-based "request" from the first processor to be parked at the second processor; receiving a second HTTP-based "reply" from the second processor to the first processor in response to the second parked HTTP-based "request"; and in response to receiving the second HTTP-based "reply" transmitting a third parked HTTP-based "request" via the proxy to the second processor, the third parked HTTP "request" including an acknowledgment to the second HTTP-based "reply" and further establishing a persistent HTTP-based connection between the first processor and the second processor through the proxy server.

Applicant respectfully submits that the combination of *Susai* and *Zhu* does not render claims 1 and 20 unpatentable for at least the reason that the combination of *Susai* and *Zhu* does not disclose or suggest each and every element of these claims. For example, the combination of *Susai* and *Zhu* does not disclose or suggest an HTTP-based "request" that includes an acknowledgment to an HTTP-based "reply," which establishes a persistent HTTP-based connection between processors through a proxy server.

Susai discloses guaranteed content delivery incorporating putting a client on-hold based on response time. When a client makes a request to a server, this system utilizes an interface unit that puts the client on-hold when an estimated response time exceeds a threshold allowed to gain access to the requested server. During the hold process, the client may receive from a separate on-hold server various information such as music, sports, news, etc. (*see e.g.*, col. 5, l. 66 to col.

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any prior art status or asserted teachings of the cited art.

6, l. 4). When the client is ready to be taken off on-hold (e.g., the original server is ready to process the client's request), the interface unit translates the client request and passes it to the requested server. The interface unit then: receives a response from the requested server; translates the response; passes it to the requesting client; and then closes the connection with the client (*see e.g.,* col. 6, ll. 18-33).

Susai, however, does not disclose or suggest that the client sends acknowledgement messages within a request message for acknowledgement of receiving a reply message. In fact, *Susai* immediately closes the connection after passing the reply to the requesting client. Accordingly, *Susai* cannot possibly disclose or suggest an HTTP-based "request" that includes an acknowledgment to an HTTP-based "reply," which establishes a persistent HTTP-based connection between processors through a proxy server. Recognizing some of the deficiencies of *Susai*, the Office Action cites *Zhu*.

Zhu discloses emulating a persistent connection using HTTP. Similar to polling processes, *Zhu* sends empty get requests in order to receive screen updates (either from another client communication or from a server application). Because such request are *empty*, *Zhu* cannot possibly disclose or suggest sending an HTTP-based "request" that *includes* an acknowledgment to an HTTP-based "reply," which establishes a persistent HTTP-based connection between processors through a proxy server. Accordingly, the combination of *Susai* and *Zhu* does not disclose or suggest each and every element of claims 1 and 20; and therefore, the combination does not render these claims unpatentable.

Independent claim 13 discloses some of the other aspects of Applicant's invention described above regarding the sending of a request that the server send a reply after a period of time. Claim 13 recites, *inter alia*, a method of enabling transmission of unsolicited messages from a server to a client. The method comprises: transmitting an HTTP-based request to the

server via a proxy server to open a persistent connection therewith; selecting a connection time out period; and including the connection time out period in the HTTP-based request so that the HTTP-based request further requests a reply from the server after the expiration of the connection time out period even if there are no message to send to the client.

Applicant respectfully submits that the combination of *Coan* and *Zhu* does not render claim 13 unpatentable for at least the reason that the combination does not disclose or suggest each and every element of this claim.[3] For example, the combination of *Coan* and *Zhu* does not disclose or suggest selecting a connection time out period and including the connection time out period in the HTTP-based request transmitted to the server.

Coan discloses a wireless data service over a selected bearer service. *Coan* is directed toward problems associated with restrictions from bearer service transmissions; however, *Coan* is silent toward time out periods and HTTP-based requests. Accordingly, *Coan* cannot possibly disclose or suggest selecting a connection time out period and including the connection time out period in an HTTP-based request. Recognizing some of the deficiencies of *Coan* the Office Action cites *Zhu*.

As previously mentioned, *Zhu* discloses emulating a persistent connection using HTTP. The Office Action relies on Figs. 4-5; col. 2, ll. 25-60; col. 3, ll. 11-22; and col. 4, ll. 45-48, and claim 2, of *Zhu* as disclosing a time period which is pre-determined amount of time configured

[3] Applicant respectfully notes that while not formally argued at this time, there is also improper motivation to combine these references in the manner suggested by the Office Action. For example, the Office Action attempts to modify the confirmed push mechanism from the WAP and WSPS wireless protocol of *Coan* with the HTTP protocol of *Zhu*. Further, the Office Action also states that "the artisan would have been motivated to look into the related networking art for potential methods and apparatus for implementing" various elements of Applicant's claims. Accordingly, because the cited references are directed toward two different protocols to solve different problems associated with each, neither of these references would suggest the combination. Nevertheless, even if the protocols in *Coan* could be modified with the HTTP protocol of *Zhu*, such combination would require undue experimentation. In addition, it is clear from the statements within the Office Action that focus on the differences between Applicant's claims and the motivation to look for other art that the Office Action is using impermissible hindsight reconstruction from knowledge gleaned from Applicant's disclosure. As such, any amendment or arguments made herein should

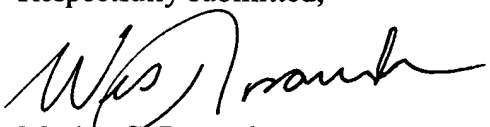
by the HTTP server. As pointed out by the Office Action, because the time is *configured by* the HTTP server, *Zhu* cannot possibly disclose or suggest including a time out period in an HTTP-based requested *transmitted to* the server. Accordingly, *Zhu* cannot possibly rectify those deficiencies identified above with regard to *Coan*. Because the combination of *Coan* and *Zhu* does not disclose or suggest each and every element of claim 13, Applicant respectfully submits that the combination does not render this claim unpatentable.

Based on at least the foregoing reasons, Applicant respectfully submits that the cited prior art fails to make obvious Applicant's invention, as claimed for example, in independent claims 1, 13, and 20. Applicant notes for the record that the remarks above render the remaining rejections of record for the independent and dependent claims moot, and thus addressing individual rejections or assertion with respect to the teachings of the cited art is unnecessary at the present time, but may be undertaken in the future if necessary or desirable, and Applicant reserves the right to do so.

All objections and rejections having been addressed, Applicant respectfully submits that the present application is in condition for allowance, and notice to this effect is earnestly solicited. Should any question arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at +1.801.533.9800.

Dated this 23rd day of May, 2005.

Respectfully submitted,



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not be construed as acquiescing to the Office Action's combination of these references, and Applicant reserves all rights available to broaden the claims and make these and all other reasonable arguments against such combination.